Designing the Academic Library: The Information Commons and Beyond

Anna Rauvenpoor

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Dr. Larry Nash White

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This paper reviews the literature on academic library design and the key factors affecting the perceived need for change. An examination of the prevalent Information Commons model is followed by a look at some of the issues that have emerged in response to this model. Finally, a discussion of possible approaches for future design explores the role of the academic library within the larger context of the institution of higher learning.

**Key Factors Driving Academic Library Design**

“For the first time in human history, information is not a scarce commodity” ([Bennett, 2009, p. 188](#_ENREF_5)). Bennett points to the transformation of information from a “scarce” to a “superabundant commodity” as the driving force behind the design of library spaces (p.181). He asserts that the evolution of information has been reflected in three paradigms of library space design, which he names the “reader-centered”, the “book-centered”, and the “learning-centered” paradigms (p.182). The reader-centered paradigm, the first in this historical progression of models that goes back as far as monastic libraries, focuses on the reader and the reader’s relationship with the books. Here reading rooms, reading tables, and large windows for lighting were key elements in the design. The book-centered paradigm came about as a result of growing book collections and an “unrelenting need for more shelving” (p.185). Book space slowly replaced reader space and the need to accommodate collection growth became the focus of library space design during this period. Digitization and the creation of virtual space signaled the end of the book-centered paradigm and the beginning of the learning-centered paradigm which once again focuses on the reader. As Bennett explains:

Putting the learner at the center of library space planning is a return to the first paradigm, with the critical differences that information is now superabundant rather than scarce and now increasingly resident in virtual rather than in physical space. The first paradigm of library design brought the reader and printed material together in a particular physical space. But once every space is potentially a library space—that is to say, an information-rich space—the design challenge is less with the interaction of readers and books and more with the connection between space and learning (p.188).

The new, learner-centered paradigm will be explored further in a later section of this paper. While the superabundance of information has played a primary role in the design of academic libraries, there are other key factors driving the perceived need for change.

A pedagogical shift in higher education has been one of the driving forces behind the new services and facilities of the academic library ([Gayton, 2008](#_ENREF_17)). Barbara Fister ([2004](#_ENREF_13)) notes, “sociologists of knowledge argue the creation of new knowledge is a socially negotiated process. Communities share ideas….” (p.48). As learning is viewed and implemented as a collaborative process, an emphasis is being placed on group projects. These types of projects are seen as a more accurate reflection of the process of knowledge creation ([Seaman, 2006](#_ENREF_24)). In this way, faculty plays a pivotal role in defining how students use the library and its spaces. Architect Geoffrey Freeman ([2005](#_ENREF_15)) asserts that faculty members are increasingly inclined to view the library as “an extension of the classroom, as a place in which students engage in a collaborative learning process, a place where they will, it is hoped, develop or refine their critical thinking” (p.5).

Technology often acts as a “midwife” to new ideas and discoveries, and as such it must be considered a key factor in the future design of library facilities ([Frischer, 2002](#_ENREF_16)). As one author notes, “Technology-infused group study rooms and project-development spaces become laboratories that learn, these spaces are designed to be easily reconfigured in response to new technologies and pedagogies” ([Freeman, 2005, p. 5](#_ENREF_15)). Another author lists technological advances such as self-issue/return, the automation of manual handling, the use of sorting robots, compact shelving, and RFID as consequences of the digital age that have had a significant impact on library design ([Latimer, 2011](#_ENREF_18)). Frischer (2002) points to three consequences of digital technology for the research library. The first consequence shifts the focus of the library from quantity of information housed to quality of experience in information management and presentation. The second consequence is that creators of digital content need research libraries for preservation of their product and as delivery platforms for their product. The third consequence is that real space and “compelling” architecture will matter more than ever in a digital age where remote access facilitates delivery of information without entering the library. Frischer ([2002](#_ENREF_16)) states, “Users of physical libraries will want to experience something in a library that cannot be had in the office or home, and that something is the drama of the community” (p.50).

Competition in the information market by entities such as Google has presented a direct challenge to libraries to offer the kinds of comfortable spaces that make bookstores and cafes popular places to linger. Today, space is “conceived as both physical and virtual, and libraries face competition in both realms” ([Elmborg, 2010, p. 339](#_ENREF_11)). The idea of the library as a meeting place or “third place” – a place away from the home and the workplace has been popularized and is directly in line with the idea of the café within the library or learning café. Latimer ([2011](#_ENREF_18)) states that learning cafes are running successfully in many institutions and provide the kind of comfortable atmosphere that is conducive to creative and imaginative thinking. One survey asked students what made a space effective for group study and the answers included “ample space, natural light, comfortable furniture, wireless connectivity, access to food, and space tolerant of heightened noise levels” ([Bennett, 2007, p. 170](#_ENREF_3)). These are exactly the elements that are integrated in the design of a modern bookstore/café.

Finally, one key factor that all academic libraries must consider in any design scenario is funding. The capital investment made by a college or university in an academic space would reasonably hope to secure fifty or more years of value ([Long, 2005](#_ENREF_19)). However, technology is changing so quickly that one author speaks of the short term as the next 5 to 10 years and the medium term as the next 10 to 20 years ([Frischer, 2002](#_ENREF_16)). The advent of the World Wide Web in 1993 accelerated the rate of change in technology at a “breathtaking” rate and a prediction regarding where technological capabilities will stand in another 18 years is nothing more than a prediction ([Bennett, 2007](#_ENREF_3)). There is simply no precedent with which future library design can be based upon and so the best approach that can be taken is to charge architects with the task of designing flexible space. As Bennett ([2007](#_ENREF_3)) states, “We use the word flexibility to clothe our naked uncertainty about what is coming” (p.166).

**The Information Commons**

What then has been the response in library space design to these driving forces of change? In the early 1990s librarians and information technologists joined forces in the Information Arcade at the University of Iowa and in the Learning Library at the University of Southern California. They set forth to design a new set of services in response to the information technology revolution. The result of their efforts is the model now called the information commons or learning commons ([Bennett, 2009](#_ENREF_5)). The information commons model “sees rapid and fundamental change in information technology as primarily a service and pedagogical problem”([Bennett, 2009, p. 188](#_ENREF_5)). Fundamental to the design is the collaborative efforts of librarians and information technologists working to support student and faculty learning in newly designed or renovated spaces. Charles Forrest ([2005](#_ENREF_14)) notes that, “in the last decade information commons have made a sudden, dramatic, and widespread appearance in academic and research libraries across the country and around the world” (p. 296). It is such a prevalent design model that one author asked, “Who would today build or renovate an academic library without including an information commons?” ([Bennett, 2008](#_ENREF_4)). The same author notes that the topic has even “spawned its own professional literature” ([Bennett, 2007](#_ENREF_3)) and gives the following examples: Beagle, Bailey, & Tierney’s *The Information Commons Handbook* and *The Information Commons* by Haas and Robertson.

The University of Guelph Library is a more recent example of a learning commons. A survey inviting Association of Research Libraries to describe innovative and noteworthy experiments in three areas: instruction programs, virtual resource development, and space initiatives drew the following response from the University of Guelph Library: “Our latest initiatives include a unique Learning Commons curricular approach. Our goal is to embed learning, writing, research, numeracy and technology learning objectives throughout the curriculum” ([Crit, 2008](#_ENREF_9)). Additionally, the UG Learning Commons website states: “We provide expertise and resources for faculty, staff and TAs to support and enhance learning in their courses and across the curricula.” Services listed there include: Data Resource Centre, IT Help, Learning Services, Library Accessibility Services, Research & Information Literacy, Supported Learning Groups Program, and Writing Services. The services listed resemble a “menu of options” as one author defines the learning commons: “…incorporates and promotes space that reinforces learning, imagines services as a menu of options, and acknowledges and supports the success of library users in their academic pursuits” ([Stark, 2010, p. 260](#_ENREF_25)). The UG Library typifies the effort the information commons model makes to bring librarians, information technologists, and tutoring staff together in one service space.

**In Response to the Information Commons**

There has been much discussion about the perceived successes and failures of the information or learning commons as a library space design model. Several important issues have emerged in response to and evaluation of the commons model that deal with the ways in which students and faculty are actually using the academic library. This author will examine some of the prevalent issues being discussed including: the importance of the book in the research library, statistical reports on student behaviors and preferences, and reconciling the social and individual needs in the academic library.

The Importance of the Book in Research Libraries

The digital revolution has prompted some researchers to conclude that the printed book is a medium whose days are numbered ([Wisner, 2001](#_ENREF_26)). Other data suggests that more and more books in print are being published every year ([Bowker, 2004](#_ENREF_6)). What importance does the book as a format hold in the academic library and to the users pursuing scholarship within the library’s walls? One author points to the “serendipitous browsing of the stacks” as a key component in serious scholarly research ([Antell, 2007, p. 172](#_ENREF_2)). The traditional subject-classification arrangement of book collections is exactly what facilitates research in the focused browsing of the stacks ([Mann, 2007](#_ENREF_20)). The local grouping provides a search method outlined in the ACRL’s performance indicators for measuring information literacy:

The information literate student retrieves information online or in person using a variety of methods. Outcomes include: Uses various classification schemes and other systems (e.g., call number systems or indexes) to locate information resources within the library or to identify specific sites for physical exploration ([ACRL, 2000](#_ENREF_1)).

Catalog records cannot capture the “depth of information books contain at the page or paragraph level” and keyword-ranking algorithms are not efficient enough to provide for the needs of advanced scholarship ([Mann, 2007, p. 196](#_ENREF_20)). This is especially true for the more recent works still under copyright and therefore absent from benefits of digitized text searching. Findings from several surveys sponsored by the Council on Library and Information Resources found that nearly 60% of undergraduates still regard browsing stacks as “an important way” to get information and that number increases in students pursuing masters and doctoral degrees ([Mann, 2007](#_ENREF_20)).

An extension of this issue pertains to the management of print collections through remote storage. Making room for an information commons in many academic libraries necessitated the removal of a portion of the printed collection to off-site locations. The Thompson Library at Ohio State University reduced its collection size by 25% to “create more reader and information technology service space” ([Branin, 2007, p. 40](#_ENREF_7)). Books can be requested for delivery or through interlibrary loan but the removal of the books from the stacks removes an important and relevant method of searching needed in a research library. One survey of students and scholars found that: “Print is preferred for situations where the material is long or dense, and the reader has to fully comprehend the material” ([EPIC, 2004](#_ENREF_12)). The kind of information seeking behavior that aims to build a conceptual framework from which further research can proceed is commonly found in a research library and it prefers print. According to the Association of Research Libraries, large research libraries have “steadily added a hundred thousand or more new print volumes to their collections each year”([Branin, 2007, p. 40](#_ENREF_7)). The ways in which these volumes are stored and shared is what is changing with consortial collection building, book depositories, and document delivery services leading the list of new practices in collection and content management ([Branin, 2007](#_ENREF_7)).

Statistics on Library Usage

An assessment of student behaviors and preferences in library usage was conducted via an online survey at a liberal arts college where approximately 46% of the college’s students completed the survey ([Bennett, 2007](#_ENREF_3)). The survey returned responses indicating that students are not using the library for the purposes intended by the information commons design. Two thirds or more of students “never” or “rarely” go to the main library to get technology assistance, get research assistance, or to study with a group. Further, 71% report never or rarely going to the library to socialize while only a third of students surveyed report having any reason to go to the library “frequently”. Of the three reasons reported for using the library frequently, two of those reasons—to use computers for coursework and to study alone—do not “intrinsically require the use of library space” ([Bennett, 2007, p. 169](#_ENREF_3)). The survey also assessed the learning behaviors important to students in regard to individual study and group study. Overwhelmingly, students ranked individual study as more important than group study. A full 96% of students reported individual study as “important” or “very important” while only 62% said group study held that same value for them. A further assessment of those spaces students used for group study revealed two locations that were mentioned with any frequency: the Science complex (31%) and Library study rooms (22%). When asked what made the science complex attractive as a group study space the following factors were frequently cited: Convenient, central, natural light, ample space, comfortable furniture, wireless connectivity, access to food, and generally heightened noise levels. Likewise, when asked what factors should be included in a possible commons space in the main library, the three most frequently “gotta have” responses were extended hours (80%), comfortable lounge seating (75%), and café (54%). While this is just one survey, the indications “that the learning behaviors and preferences these students describe correspond very little with the service and instructional aspirations that typically motivate the information or learning commons” are thought-provoking in terms of designing libraries for the future ([Bennett, 2007, p. 170](#_ENREF_3)).

Social Nature vs. Communal Nature

The question of whether or not the current prevalent design model for the academic library is meeting user needs is further explored in an examination of the traditional nature of academic libraries. One author explains the communal nature of the library as it is valued by the user:

Historically, patrons have come to academic libraries not only for the intellectual resources they offer, but also for the spaces in which to seriously engage those resources. The rise of electronic resources may mean that patrons no longer have to come to academic libraries to access the information they need, but many still come anyway. What they come for and value is the “communal” experience of seeing and being seen by others, quietly engaged in the same serious, studious activity” ([Gayton, 2008, p. 60](#_ENREF_17)).

The author continues by contrasting the nature of the social model (embodied in the information commons) with the nature of the communal academic library. In the social model, students and faculty collaborate and communicate in the creation of new knowledge. He asserts that the addition of social services like cafes and group study spaces encourages behaviors that are incongruent with the communal nature of quiet, serious study. The incongruity is described as such: “Communal activity in academic libraries is a solitary activity: it is studious, contemplative, and quiet. Social activity is a group activity: it is sometimes studious, not always contemplative, and certainly not quiet” ([Gayton, 2008, p. 60](#_ENREF_17)).

Many writers have commented on user’s value of the traditional communal nature of the academic library. Some have emphasized the social aspects of solitary study in the library. One author writes,

“One of the powerful attractions of libraries is the unique pleasure of being alone, in a quiet place, while simultaneously being in a public place associated with scholarship….Student focus groups and anecdotal evidence portray individual study as both a private and a communal act….Nationally, the traditional reading room is enjoying a renaissance as a place to study in the presence of others; it is a place to see and be seen while working privately”([Demas, 2005, p. 29](#_ENREF_10)).

In a society where silence is undervalued, the library can offer a “contemplative oasis” from which to draw inspiration ([Freeman, 2005, p. 6](#_ENREF_15)). Another author explains that a lack of noise does not, by definition, indicate a lack of social knowledge construction. She writes,

We live in a noisy society, where it is frequently expected that exchange of energies necessitate sound. But communal study in a library fosters a silent exchange of energy, and quiet study is in truth an active experience. By providing quiet space, the library ensures a welcome refuge from pervasive societal noise ([Ranseen, 2002, p. 204](#_ENREF_23)).

It has also been observed that more students are requesting quiet areas in the library that prohibit the use of personal devices and computers in an effort to create an atmosphere conducive to serious study ([Demas, 2005](#_ENREF_10)). In a society where noise is the norm and personal devices are becoming extensions of our physical selves, how does the academic library reconcile the apparent need for more communal space in a space designed to be an information commons? Separation of spaces seems to be the obvious answer but separation can be problematic in a space that was designed for openness and flexibility. Accommodating the variety of acoustic conditions that are needed is not, as one author notes, “a matter of controlling acoustics or disciplining listeners”. Instead, she writes,

“Considering the sounds of human presence, the sounds of media, the sounds of building materials, and how these various sounds interact; considering how various acoustic zones should be positioned in relation to one another….considering what practices and postures of listening and learning the library intends to promote –all of these are issues that inform the design of libraries that sound like the dynamic, responsive, culturally resonant institutions that today’s libraries strive to be”([Mattern, 2007, p. 298](#_ENREF_21)).

**Possibilities in Future Design Approaches**

In considering new models of academic library design, what approaches are being formulated to address the future role of academic libraries and librarians? One approach takes root in the third paradigm change as defined by Bennett ([2009](#_ENREF_5)) to be the learning-centered design. In this approach, the focus is aimed at a systematic understanding of the culture of student learning and ways in which design can affect those behaviors to better advance the mission of the institution. This model, what Bennett refers to as the mission-based approach, chooses learning over services as the main function of the library. The library is viewed as a learning enterprise instead of a repository for information, the student is viewed as an intentional learner instead of a consumer of information, and librarians are viewed as educators that enact the learning mission of the institution instead of supporters of learning. This approach calls for a paradigm shift in the profession of librarianship—“of joining with students and faculty as collaborators in enacting the learning missions of our institutions” ([Bennett, 2009, p. 195](#_ENREF_5)).

In another model, similar to the mission-based approach, the Athenaeum model’s guiding principle is the creation of a “unique cultural center that inspires, supports, and contextualizes its users engagement with scholarship” ([Demas, 2005, p. 3](#_ENREF_10)). The Athenaeum model also recognizes a paradigm shift in design from the service model where the librarian acts as gatekeeper to a learning model where librarians are “actively engaging in the creation and dissemination of knowledge” ([Caniano, 2010, p. 5](#_ENREF_8)). In this approach, the academic librarian’s work moves beyond library instruction classes and into workshops, lectures, and seminars that “cover the academic spectrum”([Caniano, 2010, p. 5](#_ENREF_8)). It requires academic librarians to delve further into the subject specialization for which they hold a master’s degree. In this way, they can support the curriculum of that subject and contribute to the development of the curriculum through the use of the library and its resources.

While both the mission-based and Athenaeum models seem to call for a shift away from the service oriented model of the information commons, the real difference lies in questions that are first asked in the design process. Jeanne Narum, Director of Project Kaleidoscope observes that “too often planning for new spaces…begins with the wrong questions—questions about what and how much will go in the space”([Narum, 2007](#_ENREF_22)). The result of asking those questions first is an answer that defines things and services instead of functions. Asking what should *happen* in a space instead of what should *be* in a space will shape planning and design in a fundamental way. In designing for a space where learning happens, the academic library commits to being a space that is integral to the institution and its mission ([Bennett, 2007](#_ENREF_3)).

**Conclusion**

Academic library design has been driven by a variety of key factors that continue to shift and change with the emergence of new technologies and learning pedagogies. The rate at which technology is changing makes it a prohibitive feature on which to base design, the best that can be done is to design for flexibility in accommodating new technologies in the future. The capital investment that goes into planning and building a new academic library or renovation needs to return many more years of investment than what the foreseeable future allows. User statistics of the library reveal that the need for services is down while the need for well-designed, comfortable spaces that meet a range of study needs is increasing. As a reflection of the shift in higher education from teaching-centered to learning-centered pedagogies, the academic library needs to reevaluate its role in enacting the mission statement of the institution. Design that asks the right first questions based upon what should *happen* in the library is more likely to yield results that answer the questions of how the academic library can move from the support of learning to the enactment of learning.

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